## CLAIMS

What is claimed:

1. An apparatus for use in a radiation procedure, comprising:

a radiation filter having a first portion and a second portion, the first and the second portions forming a layer for filtering radiation impinging thereon;

wherein the first portion is made from a first material having a first x-ray filtering characteristic, and the second portion is made from a second material having a second x-ray filtering characteristic.

2. The apparatus of claim 1, further comprising a radiation source for generating the radiation.

3. The apparatus of claim 2, further comprising a gantry to which the radiation source is secured.

4. The apparatus of claim 2, wherein the radiation source is a part of a MRI machine.

5. The apparatus of claim 2, wherein the radiation source is a part of a PET machine.

6. The apparatus of claim 2, wherein the radiation source comprises an anode that includes a rare earth element, a platinum group metal, or combination thereof.

7. The apparatus of claim 2, wherein the radiation source comprises a voltage generator.

8. The apparatus of claim 7, further comprising a switching element coupled to the voltage generator, the switching element configured to modulate the voltage generated by the voltage generator.

9. The apparatus of claim 1, further comprising an imager for generating image data in response to radiation that has been filtered by the layer.

10. The apparatus of claim 9, wherein the imager has a first image element for generating a first image data in response to radiation that has been filtered by the first portion of the radiation filter, and a second image element for generating a second image data in response to radiation that has been filtered by the second portion of the radiation filter.

11. The apparatus of claim 9, further comprising a gantry, wherein the imager and the radiation filter are secured to the gantry.

12. The apparatus of claim 9, wherein the imager is coupled to a structure for supporting an object to which filtered radiation is directed.

13. The apparatus of claim 1, wherein either or both of the first and the second materials are selected from the group consisting of aluminum, copper, and molybdenum.

14. The apparatus of claim 1, wherein the first portion and the second portion are secured to a structure.

15. The apparatus of claim 1, wherein the first portion is secured to a first structure, and the second portion is secured to a second structure.

16. An apparatus for use in a radiation procedure, comprising:

a first target material;

a second target material; and

an accelerator for accelerating particles towards the first target material and the second target material to generate x-rays at a first energy level and a second energy level, respectively.

17. The apparatus of claim 16, wherein either or both of the target materials includes a rare earth element, a platinum group metal, or combination thereof.

18. The apparatus of claim 16, further comprising an electromagnetic field generator, the electromagnetic field configured to generate an electromagnetic field that deflects the accelerating particles such that the particles impinge onto one of the first and the second target materials.

19. The apparatus of claim 16, wherein the first and the second target materials are secured to a disk.

20. The apparatus of claim 19, further comprising a motor secured to the disk, the motor configured to rotate the disk such that the electrons impinge onto one of the first and the second target materials.

21. A method for generating image data, comprising:

generating a x-ray radiation;

applying a first filter factor to the x-ray radiation to obtain a first filtered radiation;

generating a first set of image data in response to the first filtered radiation;

applying a second filter factor to the x-ray radiation to obtain a second filtered radiation; and

generating a second set of image data in response to the second filtered radiation;

wherein the first and the second filter factor is applied automatically using a machine.

22. The method of claim 21, wherein the first filter factor is applied by placing a first filter into the x-ray radiation.

23. The method of claim 21, wherein the second filter factor is applied by placing a second filter into the x-ray radiation.

24. The method of claim 21, wherein the first filter factor is the same as the second filter factor.

25. The method of claim 21, wherein the first filter factor is different from the second filter factor.

26. The method of claim 21, wherein either or both of the first and the second filter factors is a null factor.

27. The method of claim 21, wherein the first filter factor and the second filter factor are applied by placing a first filter and a second filter, respectively, into the x-ray radiation.

28. The method of claim 27, wherein the first filter and the second filter are secured to a structure, and the first and the second filters are placed into the x-ray radiation by rotating the structure.

29. The method of claim 21, wherein the first set and the second set of image data are generated using an imager.

30. The method of claim 29, further comprising collecting the first set and the second set of image data from the imager.

31. The method of claim 30, wherein the collection of the first and the second sets of image data is synchronized with positions of the first and the second filters.

32. The method of claim 21, wherein the first set of image data is generated using a first imager, and the second set of image data is generated using a second imager.

33. The method of claim 32, further comprising collecting the first set and the second set of image data from the first and the second imagers, respectively.

34. The method of claim 27, wherein either or both of the first and second filters comprise a material selected from the group consisting of aluminum, copper, and molybdenum.

35. A method for generating image data, comprising:

applying a first voltage to generate radiation at a first energy level;

generating a first set of image data in response to the radiation at the first energy level;

applying a second voltage to generate radiation at a second energy level;

generating a second set of image data in response to the radiation at the second energy level; and

creating composite image data using the first and the second sets of image data;

wherein the first and the second voltages are applied using a single voltage supply.

36. The method of claim 35, wherein the composite image data is created by subtracting the first set of image data from the second set of image data.

37. The method of claim 35, wherein the creating the composite image data comprises:

modifying the first set of image data;

modifying the second set of image data; and

subtracting the first modified set of image data from the second modified set of image data.

38. The method of claim 37, wherein the steps of modifying comprises applying a logarithmic transform to the first and the second sets of image data.

39. An apparatus for use in a radiation procedure, comprising:

a structure;

a first radiation filter secured to the structure;

a second radiation filter secured to the structure; and

a positioner coupled to the structure, the positioner configured to move the structure between a first position and a second position, wherein the first radiation filter is adapted to receive a radiation when the structure is in the first position, and the second radiation filter is adapted to receive the radiation when the structure is in the second position.

40. The apparatus of claim 39, wherein the structure comprises a wheel.

41. The apparatus of claim 39, wherein the positioner comprises a motor.

42. The apparatus of claim 39, wherein either or both of the first and the second radiation filters is made from a material selected from the group consisting of aluminum, copper, and molybdenum.